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TIMOTHY P. O'HAGAN
8710 KILKENNY CT
FORT MYERS, FL 33912

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SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	**Application No.** 10/627,593	**Applicant(s)** ZHU ET AL.	
	Examiner Lin Liu	**Art Unit** 2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 26 July 2003.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-30 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-30 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 07/26/2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Specification Objection

1. The disclosure is objected to because of the following informalities: figures 5a and 5b, the "independent frame" is labeled as "54", however, according to the specification (page 11 lines 9, 10 and 30, and page 12, lines 1, 12 and 13), "independent frame" is incorrectly referred as "56".

Appropriate correction is required.

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim 31 been renumbered 30.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims **1, 16, 24 and 25** are rejected under 35 U.S.C 102 (b) as being anticipated by **Walters (Publication No.: US 2001/0052019)**.

Consider **claim 1,** Walters teaches a video mail server comprising: a video call signaling module (fig. 1, video streaming server 50) coupled to an internet protocol

network (fig. 1, internet connection) via an internet protocol services module (fig. 1, ISP 30) for: establishing a first internet protocol channel (page 3, paragraph 24, noted that the electronic mail content of a message with attachments is transmitted through the ISP to video streaming server) with a caller (fig. 1, sender computer 20) remote internet video device to support a recording session over the internet protocol network (page 3, paragraph 24 and paragraph 26, when the video attachment is sent over to the video streaming server, it is being recorded into the storage in video streaming server); and establishing a second internet protocol channel (page 3 paragraph 25, noted that the video file resided at the video streaming server is streamed to the receiver computer over UDP protocol) with a user (fig. 1, receiver computer 40) remote internet video device to support a playback session over the internet protocol network (page 3 paragraph 25, noted that the video file resided at the video streaming server is streamed/playback to the receiver computer over UDP protocol); a media interface (page 3, paragraph 26, noted that video-streaming server is capable of storing video content from senders and streaming it to receivers, this implies that there is a media interface in relaying the video content) coupled to the internet protocol network via the internet protocol services module (fig. 1, ISP 30) and comprising: a recording module (page 4, paragraph 35, noted that when the video file is sent over to the video-streaming server it is stored in video mail server. This implies that there's a recording module resided at the video-streaming server in recording the video files.) for obtaining a recording sequence of compressed images (page 4, paragraph 35, noted that the recorded .avi file is compressed to .asf file by the sender computer before sending over

and storing it on the video-streaming server) representing motion video from the caller (fig. 1, sender computer 20, page 4, paragraph 35, sender computer transmits the video portion on the video mail server.) remote internet video device and storing a video mail file representing the recording sequence of compressed images in a storage (page 4, paragraph 35, sender computer transmits the video portion on the video mail server.); each compressed image frame within the video mail file being one of: an independent frame from which a video image frame can be recovered utilizing only the independent frame; and a dependent frame (page 1, paragraph 11, noted that in image temporal predictions, the prediction of a image pixel is obtained from a previously transmitted image, this implies that there's a dependent frame) from which the video image frame can only be recovered utilizing both the dependent frame and an independent frame preceding the dependent frame in the sequence; a play back module (page 3, paragraph 29, noted that when the receiver opens the video attachment file, the video file is streamed off from video-streaming server to the receiver. This implies that there's a play back module resided at the video-streaming server in retrieving the video file from the video-streaming server storage and streaming it off to receiver) for retrieving the video mail file and transferring contents of the video mail file as the playback sequence of compressed images to the user (fig. 1, receiver computer 40) remote internet video device.

Consider **claim 16,** Walters teaches a method of recording and playing back video mail, the method comprising: establishing a first internet protocol channel (page 3, paragraph 24, noted that the electronic mail content of a message with attachments is

transmitted through the ISP to video streaming server) with a caller (fig. 1, sender computer 20) remote internet video device to support a recording session over the internet protocol network (page 3, paragraph 24 and paragraph 26, when the video attachment is sent over to the video streaming server, it is being recorded into the storage in video streaming server); and establishing a second internet protocol channel (page 3 paragraph 25, noted that the video file resided at the video streaming server is streamed to the receiver computer over UDP protocol) with a user (fig. 1, receiver computer 40) remote internet video device to support a playback session over the internet protocol network (page 3 paragraph 25, noted that the video file resided at the video streaming server is streamed/playback to the receiver computer over UDP protocol); obtaining a recording sequence of compressed images (page 4, paragraph 35, noted that the recorded .avi file is compressed to .asf file by the sender computer before sending over and storing it on the video-streaming server) representing motion video from the caller (fig. 1, sender computer 20, page 4, paragraph 35, sender computer transmits the video portion on the video mail server.) remote internet video device and storing a video mail file representing the recording sequence of compressed images in a storage (page 4, paragraph 35, sender computer transmits the video portion on the video mail server.); each compressed image frame within the video mail file being one of: an independent frame from which a video image frame can be recovered utilizing only the independent frame; and a dependent frame (page 1, paragraph 11, noted that in image temporal predictions, the prediction of a image pixel is obtained from a previously transmitted image, this implies that there's a dependent frame) from

which the video image frame can only be recovered utilizing both the dependent frame and an independent frame preceding the dependent frame in the sequence; retrieving the video mail file and transferring contents (page 3, paragraph 29, noted that when the receiver opens the video attachment file, the video file is streamed off from video-streaming server to the receiver.) of the video mail file as the playback sequence of compressed images to the user (fig. 1, receiver computer 40) remote internet video device.

Consider **claim 24,** Walters teaches a method of claim 16, wherein the method further includes: establishes each of the second (fig. 1, receiver computer 40) internet protocol channel over a TCP/IP connection (page 3, paragraph 25, receiver computer receives video content from the video streaming server in UDP protocol); and the playback sequence of compressed images is the same as recording sequence of compressed images (page 4, paragraphs and 35 and 36, noted that the recorded .avi file is compressed to .asf file by the sender computer before sending over and storing it on the video-streaming server and when the video streaming server streams the video content to the receiver computer, it is also in the format of .asf file).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to change the second internet protocol channel over a TCP/IP connection, since TCP/IP protocols on the Internet grew rapidly and they have a common addressing scheme that allows any device running TCP/IP to uniquely address any other device on the Internet. In addition, it is also an open protocol standards, freely available and developed independently of any hardware or operating system.

Thus, these advantages provide the capability of being used with different hardware and software, even if Internet communication is not required.

Consider **claim 25,** Walters teaches a method of claim 24, wherein the method further includes: establishes each the first (fig. 1, sender computer 20) internet protocol channel over a TCP/IP connection (page 3, paragraph 24, noted that the sender establishes the connection with the video-streaming server through e-mail services provided by ISP, where e-mail services use HTTP transfer protocol, which uses TCP/IP as the primary protocol for reliable document transfer).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims **2, 4, 17, 19 and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Walters (Publication No.: US 2001/0052019)** in view of **Belknap (Publication no.: US 2003/0002854 A1).**

With respect to **claim 2,** Walters teaches all claimed limitation with the exception that he does not explicitly teach the video mail server of claim 1, further comprising: a video codec coupled to the media interface and comprising a decoder module and an encoder module; the decoder module: receiving the recording sequence of compressed images from the recording module; and decoding the recording sequence of compressed images to generate motion video images; the encoder module: encoding the motion video images into the playback sequence of compressed images, the playback sequence of compressed images being in a robust format that requires that at least one independent frame be included within each fixed time duration; and transferring the playback sequence of compressed images to the media interface for storing as the video mail file.

In an analogous art, Belknap teaches a video codec (page 3, paragraph 33, MPEG encoder) coupled to the media interface and comprising a decoder module (fig. 1, decoder 170) and an encoder module (fig. 1, encoder 155); the decoder module (170): receiving the recording sequence of compressed images from the recording module (page 4, paragraph 36, noted that the decoder receives data over the network); and decoding the recording sequence of compressed images to generate motion video images (page 4, paragraph 36, noted that the decoder translates the encoded digital frames back to digital video frames); the encoder module (155): encoding the motion

video images into the playback sequence of compressed images (page 3, paragraph 33, noted that the digital video frames are compressed into playback video frames), the playback sequence of compressed images being in a robust format that requires that at least one independent frame (page 2, paragraph 12, noted that the compression algorithm uses independent frames technique to encode the video frames) be included within each fixed time duration (page 4, paragraph 40, noted that the encoding process of video frames includes time stamp for each video frame. This implies that each frame is encoded with a fixed time interval); and transferring the playback sequence of compressed images to the media interface for storing as the video mail file (page 4, paragraph 38, noted that the encoded playback frames are stored on the server computer system 110).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the video codec with decoder and encoder modules as taught by Belknap in Walters' device in (compressing and decompressing the video files to streaming format so that they can be efficiently transmitted, page 2, paragraph 14).

With respect to **claim 4,** Walters teaches the video mail server (fig. 1, video streaming server 50) of claim 1: wherein the video mail file (page 4, paragraph 35, sender computer transmits the video portion on the video mail server.) comprises the recording sequence of compressed images (page 4, paragraph 35, noted that the recorded .avi file is compressed to .asf file by the sender computer before sending over and storing it on the video-streaming server).

However, Walters does not explicitly teach the video mail server further comprises: a video codec coupled to the media interface and comprising a decoder module and an encoder module, the decoder module: receiving the recording sequence of compressed images from the playback module; decoding the recording sequence of compressed images to generate motion video images; and the encoding module: generating the playback sequence of compressed images; and transferring the playback sequence of compressed images to the media interface for transferring to the user remote internet device.

In an analogous art, Belknap teaches the video mail server further comprises: a video codec (page 3, paragraph 33, MPEG encoder) coupled to the media interface and comprising a decoder module (fig. 1, decoder 170) and an encoder module (fig. 1, encoder 155), the decoder module (170): receiving the recording sequence of compressed images from the playback module (page 4, paragraph 36, noted that the decoder receives data over the network); decoding the recording sequence of compressed images to generate motion video images (page 4, paragraph 36, noted that the decoder translates the encoded digital frames back to digital video frames); and the encoding module (155): generating the playback sequence of compressed images (page 3, paragraph 33, noted that the digital video frames are compressed into playback video frames); and transferring the playback sequence of compressed images to the media interface for transferring to the user remote internet device (page 4, paragraph 38, noted that the encoded playback frames are transmitted over to client computer system 115).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the video codec with decoder and encoder modules as taught by Belknap in Walters' device in (compressing and decompressing the video files to streaming format so that they can be efficiently transmitted, page 2, paragraph 14).

With respect to **claim 17,** Walters teaches all claimed limitation with the exception that he does not explicitly teach the method of claim 16, further comprising: decoding the recording sequence of compressed images to generate motion video images; encoding the motion video images into the playback sequence of compressed images, the playback sequence of compressed images being in a robust format that requires that at least one independent frame be included within each fixed time duration; and storing the playback sequence of compressed images to the media interface for storing as the video mail file.

In an analogous art, Belknap teaches decoding the recording sequence of compressed images to generate motion video images (page 4, paragraph 36, noted that the decoder translates the encoded digital frames back to digital video frames); encoding the motion video images into the playback sequence of compressed images (page 3, paragraph 33, noted that the digital video frames are compressed into playback video frames), the playback sequence of compressed images being in a robust format that requires that at least one independent frame (page 2, paragraph 12, noted that the compression algorithm uses independent frames technique to encode the video frames) be included within each fixed time duration (page 4, paragraph 40, noted

that the encoding process of video frames includes time stamp for each video frame. This implies that each frame is encoded with a fixed time interval); and storing the playback sequence of compressed images to the media interface for storing as the video mail file (page 4, paragraph 38, noted that the encoded playback frames are stored on the server computer system 110).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the video codec with decoder and encoder modules as taught by Belknap in Walters' device in (compressing and decompressing the video files to streaming format so that they can be efficiently transmitted, page 2, paragraph 14).

With respect to **claim 19,** Walters teaches the method of claim 16 wherein: the video mail file (page 4, paragraph 35, sender computer transmits the video portion on the video mail server.) comprises the recording sequence of compressed images (page 4, paragraph 35, noted that the recorded .avi file is compressed to .asf file by the sender computer before sending over and storing it on the video-streaming server).

However, Walters does not explicitly teach the method of claim 16 further comprises: decoding the recording sequence of compressed images to generate motion video images; and encoding the motion video images to generating the playback sequence of compressed images; and transferring the playback sequence of compressed images to the user remote internet device.

In an analogous art, Belknap teaches the method comprises: decoding the recording sequence of compressed images to generate motion video images (page 4,

paragraph 36, noted that the decoder translates the encoded digital frames back to digital video frames); and encoding the motion video images to generating the playback sequence of compressed images (page 3, paragraph 33, noted that the digital video frames are compressed into playback video frames); and transferring the playback sequence of compressed images to the user remote internet device (page 4, paragraph 38, noted that the encoded playback frames are transmitted over to client computer system 115).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the video codec with decoder and encoder modules as taught by Belknap in Walters' device in (compressing and decompressing the video files to streaming format so that they can be efficiently transmitted, page 2, paragraph 14).

With respect to **claim 26,** Walters teaches a method of claim 16, wherein: the video mail file comprises the recording sequence of compressed images (page 4, paragraph 35, noted that the recorded .avi file is compressed to .asf file by the sender computer before sending over and storing it on the video-streaming server); and the method further includes establishes the first (fig. 1, sender computer 20) internet protocol channel over a TCP/IP connection (page 3, paragraph 24, noted that the sender establishes the connection with the video-streaming server through e-mail services provided by ISP. Where e-mail services use HTTP transfer protocol, which uses TCP as the primary protocol for reliable document transfer) and establishing the second (fig. 1, receiver computer 40) internet protocol channel over a UDP/IP channel

(page 3, paragraph 25, receiver computer receives video content from the video streaming server in UDP protocol).

However, Walters does not explicitly teach a method in decoding the recording sequence of compressed images to generate motion video images; encoding the motion video images to generate the playback sequence of compressed images; and transferring the playback sequence of compressed images to the media interface for transferring to the user remote internet device.

In the same field of endeavor, Belknap teaches a method in decoding the recording sequence of compressed images to generate motion video images (page 4, paragraph 36, noted that the decoder translates the encoded digital frames back to digital video frames); encoding the motion video images to generate the playback sequence of compressed images (page 3, paragraph 33, noted that the digital video frames are compressed into playback video frames); and transferring the playback sequence of compressed images to the media interface for transferring to the user remote internet device (page 4, paragraph 38, noted that the encoded playback frames are transmitted over to client computer system 115).

8. Claims **3, 5, 6, 12, 13, 18, 20, 21, 27 and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Walters (Publication No.: US 2001/0052019)** in view of **Belknap (Publication no.: US 2003/0002854 A1)** and **Gupta (Publication no.: US 2005/0038877 A1).**

With respect to **claim 3** and the correspondent method in **claim 18,** the combined modified device of Walters and Belknap teaches all the claimed limitation with the exception that they do not explicitly teach the video mail server, wherein wherein the robust format requires that the duration of time between each independent frame be a fixed period of time on the order of one second.

In an analogous art, Gupta teaches the robust format requires that the duration of time between each independent frame (page 7, paragraph 89, noted that each segment begins with independent frames) be a fixed period of time on the order of one second (page 8, paragraph 100, noted that the media segment can be controlled to be play back in a predetermined time of one second).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the flexibility of adjusting the media segment with a predetermined time of one second as taught by Gupta in the modified device of Walters and Belknap in order to provide flexible control of playing back the media segment with different predetermined amount of time interval (page 8, paragraph 100, noted that the media segment can be controlled to play back in order of one and five seconds.).

With respect to **claim 5** and the correspondent method in **claim 20,** the combined modified device of Walters and Belknap teaches all the claimed limitation with the exception that they do not explicitly teach the video mail server: wherein the playback sequence of compressed images is in a robust format that requires that at least one independent frame be included within each fixed time duration.

In an analogous art, Gupta teaches the playback sequence of compressed images is in a robust format that requires that at least one independent frame (page 7, paragraph 89, noted that each segment begins with independent frames) be included within each fixed time duration (page 8, paragraph 100, noted that the media segment can be controlled to be play back in a predetermined amount of time).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the flexibility of adjusting the media segment with a predetermined time of one second as taught by Gupta in the modified device of Walters and Belknap in order to provide flexible control of playing back the media segment with different predetermined amount of time interval (page 8, paragraph 100, noted that the media segment can be controlled to play back in order of one and five seconds).

With respect to **claim 6** and the correspondent method in **claim 21,** the combined modified device of Walters and Belknap teaches all the claimed limitation with the exception that they do not explicitly teach the video mail server, wherein the robust format requires that the duration of time between each independent frame be a fixed period of time on the order of one second.

In an analogous art, Gupta teaches the robust format requires that the duration of time between each independent frame (page 7, paragraph 89, noted that each segment begins with independent frames) be a fixed period of time on the order of one second (page 8, paragraph 100, noted that the media segment can be controlled to be play back in a predetermined time of one second).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the flexibility of adjusting the media segment with a predetermined time of one second as taught by Gupta in the modified device of Walters and Belknap in order to provide flexible control of playing back the media segment with different predetermined amount of time interval (page 8, paragraph 100, noted that the media segment can be controlled to play back in order of one and five seconds).

With respect to **claim 12** with the correspondent method in **claim 27,** the combined modified device of Walters and Belknap teaches all the claimed limitation with the exception that they do not explicitly teach the video mail server of claim, wherein the playback sequence of compressed images is in a robust format that requires that at least one independent frame be included within each fixed time duration.

In an analogous art, Gupta teaches the playback sequence of compressed images is in a robust format that requires that at least one independent frame (page 7, paragraph 89, noted that each segment begins with independent frames) be included within each fixed time duration (page 8, paragraph 100, noted that the media segment can be controlled to be play back in a predetermined amount of time).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the flexibility of adjusting the media segment with a predetermined time of one second as taught by Gupta in the modified device of Walters and Belknap in order to provide flexible control of playing back the media segment with different predetermined amount of time interval (page 8, paragraph 100,

noted that the media segment can be controlled to play back in order of one and five seconds).

With respect to **claim 13** with the correspondent method in **claim 28,** the combined modified device of Walters and Belknap teaches all the claimed limitation with the exception that they do not explicitly teach the video mail server of claim 12, wherein the robust format requires that the duration of time between each independent frame be a fixed time interval on the order of one second.

In an analogous art, Gupta teaches the robust format requires that the duration of time between each independent frame (page 7, paragraph 89, noted that each segment begins with independent frames) be a fixed time interval on the order of one second (page 8, paragraph 100, noted that the media segment can be controlled to be play back in a predetermined time of one second).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the flexibility of adjusting the media segment with a predetermined time of one second as taught by Gupta in the modified device of Walters and Belknap in order to provide flexible control of playing back the media segment with different predetermined amount of time interval (page 8, paragraph 100, noted that the media segment can be controlled to play back in order of one and five seconds).

9. Claims **9 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Walters (Publication No.: US 2001/0052019)** in view of **Campbell (Publication no.: US 2003/0140159 A1).**

With respect to **claim 9,** Walters teaches the video mail server of claim 1, wherein: wherein the call signaling module (fig. 1, video streaming server 50) establishes the second (fig. 1, receiver computer 40) internet protocol channel over a TCP/IP connection (page 3, paragraph 25, receiver computer receives video content from the video streaming server in UDP protocol); and the playback sequence of compressed images is the same as recording sequence of compressed images (page 4, paragraphs and 35 and 36, noted that the recorded .avi file is compressed to .asf file by the sender computer before sending over and storing it on the video-streaming server and when the video streaming server streams the video content to the receiver computer, it is also in the format of .asf file).

However, Walters does not explicitly teach establishing the second internet protocol channel over a TCP/IP connection and the internet protocol services module operates TCP/IP protocols to effect re-transmission of any lost TCP/IP frames on the second TCP/IP connection.

In an analogous art, Campbell teaches the internet protocol services module operates TCP/IP protocols to effect re-transmission of any lost TCP/IP frames on the second TCP/IP connection (page 1, paragraph 11, TCP/IP has a technique of retransmission of lost frames).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to change the second internet protocol channel over a TCP/IP connection, since TCP/IP protocols on the Internet grew rapidly and they have a common addressing scheme that allows any device running TCP/IP to uniquely address

any other device on the Internet. In addition, it is also an open protocol standards, freely available and developed independently of any hardware or operating system. Thus, these advantages provide the capability of being used with different hardware and software, even if Internet communication is not required. It would also have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the technique of TCP/IP retransmission of frames as taught by Campbell in Walters' device in order to (facilitate reliable document and text transfer internally between frames and externally between associated video and audio streams, page 1, paragraph 11).

With respect to **claim 10,** Walters teaches the video mail server of claim 9, wherein: wherein the call signaling (fig. 1, video streaming server 50) module further establishes first (fig. 1, sender computer 20) internet protocol channel over a TCP/IP connection (page 3, paragraph 24, noted that the sender establishes the connection with the video-streaming server through e-mail services provided by ISP, where e-mail services use HTTP transfer protocol, which uses TCP/IP as the primary protocol for reliable document transfer).

However, Walters not explicitly teach the internet protocol services module further operates TCP/IP protocols to effect re-transmission of any lost TCP/IP frames on the first TCP/IP connection; and

In an analogous art, Campbell teaches the internet protocol services module further operates TCP/IP protocols to effect re-transmission of any lost TCP/IP frames on

the first TCP/IP connection (page 1, paragraph 11, TCP/IP has a technique of retransmission of lost frames); and

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the technique of TCP/IP retransmission of frames as taught by Campbell in Walters' device in order to (facilitate reliable document and text transfer internally between frames and externally between associated video and audio streams, page 1, paragraph 11).

10. Claims **7, 8, 11, 14, 15, 22, 23, 29 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Walters (Publication No.: US 2001/0052019)** in view of **Belknap (Publication no.: US 2003/0002854 A1)** and **Campbell (Publication no.: US 2003/0140159 A1).**

With respect to **claim 7,** Walters teaches the video mail server (fig. 1, video streaming server 50) of claim 4 comprises the playback module (page 3, paragraph 29, noted that when the receiver opens the video attachment file, the video file is streamed off from video-streaming server to the receiver. This implies that there's a play back module resided at the video-streaming server in retrieving the video file from the video-streaming server storage and streaming it off to receiver).

However, Walters does not explicitly teach wherein: the playback module receives a lost frame message from the user remote internet video device when the user remote internet video device detects loss of a frame within the playback sequence of compressed images; and video codec: compresses a next image frame of the motion

video images as an independent frame in response to the playback module receiving a lost frame message; and includes the next image frame in the playback sequence of compressed images.

In the same field of endeavor, Belknap teaches a video codec (page 3, paragraph 33, MPEG encoder): compresses a next image frame of the motion video images as an independent frame (page 2, paragraph 12, noted that the compression algorithm uses independent frames technique to encode the video frames).

The combined modified device of Walters and Belknap teaches all the claimed limitation with the exception that they do not teach wherein: the playback module receives a lost frame message from the user remote internet video device when the user remote internet video device detects loss of a frame within the playback sequence of compressed images; and video codec: compresses a next image frame of the motion video images as an independent frame in response to the playback module receiving a lost frame message; and includes the next image frame in the playback sequence of compressed images.

In the same field of endeavor, Campbell teaches wherein: the playback module receives a lost frame message (page 7, paragraphs 116 and 131, noted that once client detects frame lost, it sends a feed back message back to the server indicating that frame lost occurred) from the user remote (fig. 6, client side 610) internet video device when the user remote internet video device detects loss of a frame (page 7, paragraphs 116 and 131, noted that once client detects frame lost, it sends a feed back message back to the server indicating that frame lost occurred) within the playback sequence of

compressed images; and video codec: compresses a next image frame of the motion video images as an independent frame in response to the playback module receiving a lost frame message (page 7, paragraphs 116 and 131, noted that once client detects frame lost, it sends a feed back message back to the server indicating that frame lost occurred); and includes the next image frame in the playback sequence of compressed images (page 8, paragraph 147, noted that once the server receives the feedback message from the client side, it adjusts the transmission rate with the next video frames).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the teaching of sending a feedback message from the client to the server side to indicate the frame loss as taught by Campbell in the combined device of Walters and Belknap in order to according (adjust the retransmission rate of the remaining video content with the client's available bandwidth, page 8, paragraph 145 and 147 and 160).

With respect to **claim 8,** Walters teaches the video mail server (fig. 1, video streaming server 50) of claim 1: wherein the video mail file (fig. 1, sender computer 20, page 4, paragraph 35, sender computer transmits the video portion on the video mail server) comprises the recording sequence of compressed images (page 4, paragraph 35, noted that the recorded .avi file is compressed to .asf file by the sender computer before sending over and storing it on the video-streaming server);

However, Walters does not explicitly teach wherein the video mail server further comprises: a video codec coupled to the media interface and comprising a decoding

module and an encoding module, the decoding module: receiving the recording sequence of compressed images from the playback module; decoding the recording sequence of compressed images to generate motion video images; and queuing each motion video image for encoding, by the encoding module, as a lost frame correction frame; and wherein the playback module comprises a delay buffer for delaying the playback sequence of compressed images for a period of time such that each frame within the playback sequence of compressed images is queued for sending to the user remote internet device at a time that corresponds to the motion video image queued for encoding by the encoding module as a lost frame correction frame such that a lost frame correction frame may be substituted for a frame in the playback sequence of compressed images in response to receiving an lost frame message.

In the same field of endeavor, Belknap teaches wherein the video mail server further comprises: a video codec (page 3, paragraph 33, MPEG encoder) coupled to the media interface and comprising a decoding module (fig. 1, decoder 170) and an encoding module (fig. 1, encoder 155), the decoding module (170): receiving the recording sequence of compressed images from the playback module (page 4, paragraph 36, noted that the decoder receives data over the network); decoding the recording sequence of compressed images to generate motion video images (page 4, paragraph 36, noted that the decoder translates the encoded digital frames back to digital video frames).

The combined modified device of Walters and Belknap teaches all the claimed limitation with the exception that they do not teach queuing each motion video image for

encoding, by the encoding module, as a lost frame correction frame; and wherein the playback module comprises a delay buffer for delaying the playback sequence of compressed images for a period of time such that each frame within the playback sequence of compressed images is queued for sending to the user remote internet device at a time that corresponds to the motion video image queued for encoding by the encoding module as a lost frame correction frame such that a lost frame correction frame may be substituted for a frame in the playback sequence of compressed images in response to receiving an lost frame message.

In the same field of endeavor, Campbell teaches queuing (page 7, paragraph 120, noted that a buffer is used on the server side in queuing frames before sending over to the client) each motion video image for encoding, by the encoding module, as a lost frame correction frame (page 7, paragraph 120, noted that when frame loss occurs, client demands a retransmission of frame as a correction frame); and wherein the playback module comprises a delay buffer (page 7, paragraph 120, the buffer queue) for delaying the playback sequence of compressed images for a period of time (page 7, paragraph 120, noted that the buffer queue is at least as large as the number of frames required during one round trip time and frames will not send over to the client before the buffer is full) such that each frame within the playback sequence of compressed images is queued for sending to (page 7, paragraph 120, noted that a buffer is used on the server side in queuing frames before sending over to the client) the user remote internet device at a time that corresponds to the motion video image queued for encoding by the encoding module as a lost frame correction frame such that a lost frame correction

frame may be substituted (page 7, paragraph 120, noted that when frame loss occurs, client demands a retransmission of frame as a correction frame) for a frame in the playback sequence of compressed images in response to receiving an lost frame message (page 7, paragraphs 116 and 131, noted that once client detects frame lost, it sends a feed back message back to the server indicating that frame lost occurred).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the buffer queue of storing the video frames as taught by Campbell in the combined device of Walters and Belknap in order to (be able to correctly resend the frames over to the client when requested, page 7, paragraph 120).

With respect to **claim 11,** Walters teaches the video mail server of claim 1: wherein the call signaling module (fig. 1, video streaming server 50) establishes the first (fig. 1, sender computer 20) internet protocol channel over a TCP/IP connection (page 3, paragraph 24, noted that the sender establishes the connection with the video-streaming server through e-mail services provided by ISP. Where e-mail services use HTTP transfer protocol, which uses TCP as the primary protocol for reliable document transfer) and establishes the second (fig. 1, receiver computer 40) internet protocol channel over a UDP/IP channel (page 3, paragraph 25, receiver computer receives video content from the video streaming server in UDP protocol); wherein the video mail file comprises the recording sequence of compressed images (page 4, paragraph 35, noted that the recorded .avi file is compressed to .asf file by the sender computer before sending over and storing it on the video-streaming server).

However, Walters does not explicitly teach wherein the internet protocol services module operates TCP/IP protocols to effect re-transmission of any lost TCP/IP frames on the first internet protocol channel; and wherein the video mail server further comprises: a video codec coupled to the media interface and comprising a decoder module and an encoder module, the decoder module: receiving the recording sequence of compressed images from the playback module; decoding the recording sequence of compressed images to generate motion video images; generating the playback sequence of compressed images; and transferring the playback sequence of compressed images to the media interface for transferring to the user remote internet device.

In the same field of endeavor, Belknap teaches wherein the video mail server further comprises: a video codec (page 3, paragraph 33, MPEG encoder) coupled to the media interface and comprising a decoder module (fig. 1, decoder 170) and an encoder module (fig. 1, encoder 155), the decoder module (170): receiving the recording sequence of compressed images from the playback module (page 4, paragraph 36, noted that the decoder receives data over the network); decoding the recording sequence of compressed images to generate motion video images (page 4, paragraph 36, noted that the decoder translates the encoded digital frames back to digital video frames); generating the playback sequence of compressed images (page 3, paragraph 33, noted that the digital video frames are compressed into playback video frames); and transferring the playback sequence of compressed images to the media interface for

transferring to the user remote internet device (page 4, paragraph 38, noted that the encoded playback frames are transmitted over to client computer system 115).

The combined modified device of Walters and Belknap teaches all the claimed limitation with the exception that they do not teach wherein the internet protocol services module operates TCP/IP protocols to effect re-transmission of any lost TCP/IP frames on the first internet protocol channel.

In the same field of endeavor, Campbell teaches wherein the internet protocol services module operates TCP/IP protocols to effect re-transmission of any lost TCP/IP frames on the first internet protocol channel (page 1, paragraph 11, TCP/IP has a technique of retransmission of lost frames).

With respect to **claim 14,** Walters teaches the video mail server (fig. 1, video streaming server 50) of claim 4 comprises the playback module (page 3, paragraph 29, noted that when the receiver opens the video attachment file, the video file is streamed off from video-streaming server to the receiver. This implies that there's a play back module resided at the video-streaming server in retrieving the video file from the video-streaming server storage and streaming it off to receiver).

However, Walters does not explicitly teach wherein: the playback module receives a lost frame message from the user remote internet video device when the user remote internet video device detects frame loss; and the video codec: compresses a next image frame of the motion video images as an independent frame in response to the playback module receiving a lost frame message; and includes the next image frame in the playback sequence of compressed images.

In the same field of endeavor, Belknap teaches a video codec (page 3, paragraph 33, MPEG encoder): compresses a next image frame of the motion video images as an independent frame (page 2, paragraph 12, noted that the compression algorithm uses independent frames technique to encode the video frames).

The combined modified device of Walters and Belknap teaches all the claimed limitation with the exception that they do not teach wherein: the playback module receives a lost frame message from the user remote internet video device when the user remote internet video device detects frame loss; and the video codec: compresses a next image frame of the motion video images as an independent frame in response to the playback module receiving a lost frame message; and includes the next image frame in the playback sequence of compressed images.

In the same field of endeavor, Campbell teaches wherein: the playback module receives a lost frame message (page 7, paragraphs 116 and 131, noted that once client detects frame lost, it sends a feed back message back to the server indicating that frame lost occurred) from the user remote (fig. 6. client side 610) internet video device when the user remote internet video device detects frame loss (page 7, paragraphs 116 and 131, noted that once client detects frame lost, it sends a feed back message back to the server indicating that frame lost occurred); and the video codec: compresses a next image frame of the motion video images as an independent frame in response to the playback module receiving a lost frame message (page 7, paragraphs 116 and 131, noted that once client detects frame lost, it sends a feed back message back to the server indicating that frame lost occurred); and includes the next image frame in the

playback sequence of compressed images (page 8, paragraph 147, noted that once the server receives the feedback message from the client side, it adjusts the transmission rate with the next video frames).

With respect to **claim 15,** Walters teaches the video mail server of claim 1: wherein the call signaling module (fig. 1, video streaming server 50) establishes the first (fig. 1, sender computer 20) internet protocol channel over a TCP/IP connection (page 3, paragraph 24, noted that the sender establishes the connection with the video-streaming server through e-mail services provided by ISP. Where e-mail services use HTTP transfer protocol, which uses TCP as the primary protocol for reliable document transfer) and establishes the second (fig. 1, receiver computer 40) internet protocol channel over a UDP/IP channel (page 3, paragraph 25, receiver computer receives video content from the video streaming server in UDP protocol); wherein the video mail file comprises the recording sequence of compressed images (page 4, paragraph 35, noted that the recorded .avi file is compressed to .asf file by the sender computer before sending over and storing it on the video-streaming server).

However, Walters does not explicitly teach wherein the internet protocol services module operates TCP/IP protocols to effect re-transmission of any lost TCP/IP frames on first TCP/IP connection; wherein the video mail server further comprises a video codec coupled to the media interface and comprising a decoder module and an encoder module; the decoder module: receiving the recording sequence of compressed images from the playback module; decoding the recording sequence of compressed images to generate motion video images; queuing each motion video image for encoding as an

error correction frame; and wherein the playback module comprises: a delay buffer for delaying the playback sequence of compressed images for a period of time such that each frame within the playback sequence of compressed images is queued for sending to the user remote internet device at a time that corresponds to the video image frame queued for encoding by the encoding module as a lost frame correction frame such that the lost frame correction frame may be substituted for a frame in the playback sequence of compressed images in response to receiving a lost frame message.

In the same field of endeavor, Belknap teaches wherein the video mail server further comprises: a video codec (page 3, paragraph 33, MPEG encoder) coupled to the media interface and comprising a decoder module (fig. 1, decoder 170) and an encoder module (fig. 1, encoder 155), the decoder module (170): receiving the recording sequence of compressed images from the playback module (page 4, paragraph 36, noted that the decoder receives data over the network); decoding the recording sequence of compressed images to generate motion video images (page 4, paragraph 36, noted that the decoder translates the encoded digital frames back to digital video frames).

The combined modified device of Walters and Belknap teaches all the claimed limitation with the exception that they do not teach wherein the internet protocol services module operates TCP/IP protocols to effect re-transmission of any lost TCP/IP frames on first TCP/IP connection; queuing each motion video image for encoding as an error correction frame; and wherein the playback module comprises: a delay buffer for delaying the playback sequence of compressed images for a period of time such that

each frame within the playback sequence of compressed images is queued for sending to the user remote internet device at a time that corresponds to the video image frame queued for encoding by the encoding module as a lost frame correction frame such that the lost frame correction frame may be substituted for a frame in the playback sequence of compressed images in response to receiving a lost frame message.

In the same field of endeavor, Campbell teaches queuing (page 7, paragraph 120, noted that a buffer is used on the server side in queuing frames before sending over to the client) each motion video image for encoding, by the encoding module, as a error correction frame (page 7, paragraph 120, noted that when frame loss occurs, client demands a retransmission of frame as a error correction frame); and wherein the playback module comprises a delay buffer (page 7, paragraph 120, the buffer queue) for delaying the playback sequence of compressed images for a period of time (page 7, paragraph 120, noted that the buffer queue is at least as large as the number of frames required during one round trip time and frames will not send over to the client before the buffer is full) such that each frame within the playback sequence of compressed images is queued for sending to (page 7, paragraph 120, noted that a buffer is used on the server side in queuing frames before sending over to the client) the user remote internet device at a time that corresponds to the motion video image queued for encoding by the encoding module as a lost frame correction frame such that a lost frame correction frame may be substituted (page 7, paragraph 120, noted that when frame loss occurs, client demands a retransmission of frame as a correction frame) for a frame in the playback sequence of compressed images in response to receiving a lost frame

message (page 7, paragraphs 116 and 131, noted that once client detects frame lost, it sends a feed back message back to the server indicating that frame lost occurred).

With respect to **claim 22,** Walters teaches all the claimed limitation with the exception that they do not explicitly teach the method of claim 19, further comprising: receiving a lost frame message from the user remote internet video device when the user remote internet video device detects loss of a frame within the playback sequence of compressed images; compressing a next image frame of the motion video images as an independent frame in response to receiving an lost frame message; and including the next image frame in the playback sequence of compressed images.

In the same field of endeavor, Belknap teaches a video codec compresses a next image frame of the motion video images as an independent frame (page 2, paragraph 12, noted that the compression algorithm uses independent frames technique to encode the video frames).

The combined modified device of Walters and Belknap teaches all the claimed limitation with the exception that they do not teach the method in receiving a lost frame message from the user remote internet video device when the user remote internet video device detects loss of a frame within the playback sequence of compressed images; compressing a next image frame of the motion video images as an independent frame in response to receiving an lost frame message; and including the next image frame in the playback sequence of compressed images.

In the same field of endeavor, Campbell teaches a method in receiving a lost frame message (page 7, paragraphs 116 and 131, noted that once client detects frame

lost, it sends a feed back message back to the server indicating that frame lost occurred) from the user remote (fig. 6, client side 610) internet video device when the user remote internet video device detects loss of a frame (page 7, paragraphs 116 and 131, noted that once client detects loss of frame, it sends a feed back message back to the server indicating that frame lost occurred) within the playback sequence of compressed images; compressing a next image frame of the motion video images as an independent frame in response to the playback module receiving an lost frame message (page 7, paragraphs 116 and 131, noted that once client detects frame lost, it sends a feed back message back to the server indicating that frame lost occurred); and includes the next image frame in the playback sequence of compressed images (page 8, paragraph 147, noted that once the server receives the feedback message from the client side, it adjusts the transmission rate with the next video frames).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the teaching of sending a feedback message from the client to the server side to indicate the frame loss as taught by Campbell in the combined device of Walters and Belknap in order to according (adjust the retransmission rate of the remaining video content with the client's available bandwidth, page 8, paragraph 145 and 147 and 160).

With respect to **claim 23,** Walters teaches the method of claim 16, wherein the video mail file (fig. 1, sender computer 20, page 4, paragraph 35, sender computer transmits the video portion on the video mail server) comprises the recording sequence of compressed images (page 4, paragraph 35, noted that the recorded .avi file is

compressed to .asf file by the sender computer before sending over and storing it on the video-streaming server);

However, Walters does not explicitly teach a method further comprises decoding the recording sequence of compressed images to generate motion video images; queuing each motion video image for encoding as a lost frame correction frame; and delaying the playback sequence of compressed images for a period of time such that each frame within the playback sequence of compressed images is queued for sending to the user remote internet device at a time that corresponds to the motion video image queued for encoding as a lost frame correction frame such that an lost frame correction frame may be substituted for a frame in the playback sequence of compressed images in response to receiving an lost frame message.

In the same field of endeavor, Belknap teaches a method further comprises: decoding the recording sequence of compressed images to generate motion video images (page 4, paragraph 36, noted that the decoder translates the encoded digital frames back to digital video frames).

The combined modified device of Walters and Belknap teaches all the claimed limitation with the exception that they do not teach a method in delaying the playback sequence of compressed images for a period of time such that each frame within the playback sequence of compressed images is queued for sending to the user remote internet device at a time that corresponds to the motion video image queued for encoding as a lost frame correction frame such that an lost frame correction frame may

be substituted for a frame in the playback sequence of compressed images in response to receiving an lost frame message.

In the same field of endeavor, Campbell teaches a method for delaying the playback sequence of compressed images for a period of time (page 7, paragraph 120, noted that the buffer queue is at least as large as the number of frames required during one round trip time and frames will not send over to the client before the buffer is full) such that each frame within the playback sequence of compressed images is queued for sending to (page 7, paragraph 120, noted that a buffer is used on the server side in queuing frames before sending over to the client) the user remote internet device at a time that corresponds to the motion video image queued for encoding as a lost frame correction frame such that an lost frame correction frame may be substituted (page 7, paragraph 120, noted that when frame loss occurs, client demands a retransmission of frame as a correction frame) for a frame in the playback sequence of compressed images in response to receiving an lost frame message (page 7, paragraphs 116 and 131, noted that once client detects frame lost, it sends a feed back message back to the server indicating that frame lost occurred).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the buffer queue of storing the video frames as taught by Campbell in the combined device of Walters and Belknap in order to (be able to correctly resend the frames over to the client when requested, page 7, paragraph 120).

With respect to **claim 29,** Walters teaches all claimed limitation with the exception that he does not explicitly teach the method of claim 26, wherein the method further comprises: receiving a lost frame message from the user remote internet video device when the user remote internet video device detects loss of a frame within the play back sequence of compressed images; compressing a next image frame in the sequence of motion video images as an independent frame in response to receiving an lost frame message; and including the next image frame in the play back sequence of compressed images.

In the same field of endeavor, Belknap teaches a method a compressing a next image frame of the motion video images as an independent frame (page 2, paragraph 12, noted that the compression algorithm uses independent frames technique to encode the video frames).

The combined modified device of Walters and Belknap teaches all the claimed limitation with the exception that they do not teach a method wherein: receiving a lost frame message from the user remote internet video device when the user remote internet video device detects loss of a frame within the play back sequence of compressed images; compressing a next image frame in the sequence of motion video images as an independent frame in response to receiving an lost frame message; and including the next image frame in the play back sequence of compressed images.

In the same field of endeavor, Campbell teaches a method wherein in receiving a lost frame message (page 7, paragraphs 116 and 131, noted that once client detects frame lost, it sends a feed back message back to the server indicating that frame lost

occurred) from the user remote (fig. 6. client side 610) internet video device when the user remote internet video device detects loss of frame (page 7, paragraphs 116 and 131, noted that once client detects frame lost, it sends a feed back message back to the server indicating that frame lost occurred); and compressing a next image frame of the motion video images as an independent frame in response to the playback module receiving a lost frame message (page 7, paragraphs 116 and 131, noted that once client detects frame lost, it sends a feed back message back to the server indicating that frame lost occurred); and includes the next image frame in the playback sequence of compressed images (page 8, paragraph 147, noted that once the server receives the feedback message from the client side, it adjusts the transmission rate with the next video frames).

With respect to **claim 30,** Walters teaches the method of claim 16, wherein: the video mail file comprises the recording sequence of compressed images (page 4, paragraph 35, noted that the recorded .avi file is compressed to .asf file by the sender computer before sending over and storing it on the video-streaming server); and the method further includes establishes the first (fig. 1, sender computer 20) internet protocol channel over a TCP/IP connection (page 3, paragraph 24, noted that the sender establishes the connection with the video-streaming server through e-mail services provided by ISP. Where e-mail services use HTTP transfer protocol, which uses TCP as the primary protocol for reliable document transfer) and establishing the second (fig. 1, receiver computer 40) internet protocol channel over a UDP/IP channel

(page 3, paragraph 25, receiver computer receives video content from the video streaming server in UDP protocol).

However, Walters does not explicitly teach a method in decoding the recording sequence of compressed images to generate motion video image; queuing each motion video image for encoding as a lost frame correction frame; and delaying the playback sequence of compressed images for a period of time such that each frame within the playback sequence of compressed images is queued for sending to the user remote internet device at a time that corresponds to the motion video image queued for encoding as a lost frame correction frame such that an lost frame correction frame may be substituted for a frame in the playback sequence of compressed images in response to receiving an lost frame message.

In the same field of endeavor, Belknap teaches a method in decoding the recording sequence of compressed images to generate motion video images (page 4, paragraph 36, noted that the decoder translates the encoded digital frames back to digital video frames).

The combined modified device of Walters and Belknap teaches all the claimed limitation with the exception that they do not teach a method in queuing each motion video image for encoding as a lost frame correction frame; and delaying the playback sequence of compressed images for a period of time such that each frame within the playback sequence of compressed images is queued for sending to the user remote internet device at a time that corresponds to the motion video image queued for encoding as a lost frame correction frame such that an lost frame correction frame may

be substituted for a frame in the playback sequence of compressed images in response to receiving an lost frame message.

In the same field of endeavor, Campbell teaches a method in queuing (page 7, paragraph 120, noted that a buffer is used on the server side in queuing frames before sending over to the client) each motion video image for encoding as a lost frame correction frame (page 7, paragraph 120, noted that when frame loss occurs, client demands a retransmission of frame as a error correction frame); and delaying the playback sequence of compressed images for a period of time (page 7, paragraph 120, noted that the buffer queue is at least as large as the number of frames required during one round trip time and frames will not send over to the client before the buffer is full) such that each frame within the playback sequence of compressed images is queued for sending to (page 7, paragraph 120, noted that a buffer is used on the server side in queuing frames before sending over to the client) the user remote internet device at a time that corresponds to the motion video image queued for encoding as a lost frame correction frame such that a lost frame correction frame may be substituted (page 7, paragraph 120, noted that when frame loss occurs, client demands a retransmission of frame as a correction frame) for a frame in the playback sequence of compressed images in response to receiving a lost frame message (page 7, paragraphs 116 and 131, noted that once client detects frame lost, it sends a feed back message back to the server indicating that frame lost occurred).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lee discloses a global messaging with distributed adaptive streaming control in publication no.: US 2002/0049852. Wang discloses a media coding for loss recovery with remotely predicted data units in patent no.: US 6,499,060. Hashimoto discloses a video mail system capable of transferring large quantities of data without hampering other data transmissions in patent no.: 5,912,697. Kost discloses a system and process for compression, multiplexing, and real-time low-latency playback of networked audio/video bit streams in publication no.: US 2002/0154691. Elliott discloses a system and method for providing requested quality of service in a hybrid network in publication no.: US 2002/0064149.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Liu whose telephone number is (571) 270-1447. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

L.Liu
02/02/2007

Patrick N. Edouard

PATRICK N. EDOUARD
SUPERVISORY PATENT EXAMINER